

COMMENTS ON TYPE-SPECIES OF *SCIAENA* LINNAEUS

Z.N.(S.) 850

(See volume 20, pages 349-360)

By Dr. Carl L. Hubbs (*Scripps Institute of Oceanography,  
La Jolla, California, U.S.A.*)

As a working ichthyologist, currently engaged in taxonomic research on the Sciaenidae, I wish to record my complete concurrence in principle with the proposal of Dr. Ethelwynn Trewavas regarding the generic names *Sciaena*, *Umbrina* and *Argyrosomus*, and to commend her scholarly and detailed discussion. Troublesome complications have long existed regarding the names of these important and very extensively treated genera, and it is high time that appropriate action be taken to fix the nomenclature. Any revision of a prior Opinion should obviously be approached with caution, but in this case is clearly called for, for the solution of the problems involved, and because the original Opinion (93) introduced a taxonomic judgement, which was not only undesirable but, on the evidence presented by Dr. Trewavas, also erroneous.

My only doubt and query regarding the proposals pertain to the statement in item (2), "to Rule that the type-species of *Sciaena* Linnaeus, 1758, is to be accepted as *Sciaena umbra* Linnaeus, 1758, as designated by Cuvier, 1814 . . . , and restricted by him in 1817, despite the fact that Cuvier misidentified that species in 1814." This proposal would put the Commission in the position of rendering (or confirming) a taxonomic judgement, which I strongly feel it should avoid doing. There is also at least a doubt in my mind as to whether Cuvier in 1814 designated a type-species, according to the current provision of the Code. I suggest that paragraphs (2) and (3) of the proposal be restated (without any change in the outcome) to something like:

- (2) to Rule that the type-species of *Sciaena* Linnaeus, 1758, is to be accepted as *Sciaena umbra* Linnaeus, 1758, as indicated by Cuvier, 1814 (*Mem. Mus. Paris*, 1 : 13), disregarding any assumed misidentification of the species in that treatise.

[Item 5(a) specifies that *Sciaena umbra* is to be interpreted "as restricted by Cuvier, 1817;" hence it seems redundant to add this idea to proposal (2); furthermore, it is a separate item and should, I would think, call for a separately numbered paragraph, if given here.]

- (3) to confirm the addition to the Official List of Generic Names that of *Sciaena* Linnaeus, 1758 (gender: feminine), type species *Sciaena umbra* Linnaeus, 1758, as indicated by Cuvier, 1814, and as restricted by Cuvier, 1817 (so determined by Plenary Power, in Opinion 93) (Name No. 444).

These changes are suggested to avoid the questionable statement that Cuvier, 1814, designated a type-species, and to avoid the incorporation of a taxonomic decision into the Opinion.

By Dr. W. E. China (*Assistant Secretary,  
International Commission on Zoological Nomenclature*)

On 26 March 1965, the Commission was invited to vote on Voting Paper (65)15 either for or against the proposals set out in *Bull. zool. Nomencl.* 20 : 354 as amended by C. L. Hubbs (see comment above). This Voting Paper was later cancelled by the Assistant Secretary, since the proposals were severely criticised by Commissioners in returning their votes. Comments were as follows:

(1) Dr. L. B. Holthuis (*Rijksmuseum van Natuurlijke Historie, Leiden, Netherlands*). "Judging by the text of Cuvier, 1814, as cited by Dr. Trewavas in her application, that author definitely did not indicate a type-species for the genus *Sciaena*, the word type even is not at all used in this text. However, it seems rather unimportant where the first type designation for the genus was made, since the Commission in Opinion 93 has already indicated *S. umbra* L. to be the type of the genus *Sciaena*. If any doubt

as to the validity of this indication exists, the Commission now should be asked, 'to use its plenary powers to set aside all previous type designations for the genus *Sciaena* and having done so to designate *Sciaena umbra* L., 1758 as the type of that genus', in this way confirming the previous action.

"As *Sciaena umbra* L. is a composite species, a lecto- or neotype should be selected for it, action, which, if I understand correctly, has so far not been undertaken. Cuvier's (1817) so-called restrictive action is not of any legal importance and certainly not a lectotype selection. The lectotype that could be chosen is Artedi's specimen, but if there is any doubt as to its identity (it probably is no longer extant) a neotype for *S. umbra* could be best indicated.

"For these reasons though I agree with the ultimate goal of Dr. Trewavas' proposal, I object to the way in which she tries to obtain her end."

(2) Mr. C. W. Sabrosky (*U.S. Dept. of Agriculture, Entomology Research Division, Washington D.C., U.S.A.*). "The proposal as it stands is unsatisfactory on several counts, though I do not disagree with the over-all intent. I believe that it would be better (1) to suppress all previous type designations for *Sciaena* [to dispose of that by Bleeker (1863)], (2) to reaffirm the designation of *Sciaena umbra* Linnaeus published in Opinion 93, and (3) to decide, under Article 70a, that *umbra* is to be interpreted in its strict sense and not in the sense of Cuvier, 1814. Such a solution would seem simpler and more direct, and would reaffirm the nomenclatural part of Opinion 93.

"I agree with Hubbs that Cuvier (1814) did not designate a type species for *Sciaena*, and that the proposal needs rewording on that score. However, his proposed amendment is also unsatisfactory. Cuvier (1814) does not show type by indication; that method applies only to original designation (cf. Article 67b). Both Trewavas and Hubbs have applied the unrecognized method of type by elimination. Regardless of the taxonomic actions of Cuvier (1814 and 1817) all five species originally included in *Sciaena* Linnaeus were still eligible for selection as its type-species. From the evidence submitted, it appears that Bleeker (1863) produced the first legitimate type-designation.

"Opinion 93 was obviously brief and superficial in dealing with *Sciaena* (and with others?), and incorrect as well. Jordan, in the data given in Opinion 93, p. 9, says that Cuvier (1815, i.e. 1814 as now corrected) 'definitely chose *aquila* as the type of *Sciaena*', but the part of Cuvier quoted by Trewavas certainly shows no such designation. Furthermore, the nominal species *aquila* was not originally included in the genus and is ineligible for type designation. However, the Opinion did choose *umbra* as the type of *Sciaena*, and I see no need to repeal the very thing that is desired. The point that we should now decide concerns the misidentification of the type-species, and which course (*umbra* s. str. or the misidentified *umbra*) would now cause the least confusion or contribute most to stability."

(3) Dr. W. D. Ride (*Western Australian Museum, Perth, Western Australia*).

"While I agree with the general requests contained in this application, and in particular with items (1) (2) (3) (4a) and (5) of Section 12 on page 354 (as modified by Dr. Hubbs), I request the Secretary to contact the author respecting the details of (4b) before the statement is published in the appropriate List. In particular:

"(a) Is the date 1835 correct? On page 352, 3 lines from the bottom, it is referred to as 1836 although 1835 appears elsewhere.

"(b) Is the type-species of *Argyrosomus* *A. procerus*? From the statement contained in the application on pages 352-3, it appears that there are 3 species names mentioned in the original statement of the genus. One is a *nomen nudum*, another is an invalid emendation (and therefore a junior objective synonym) of the third name. The third name (i.e. *Sciaena aquila* Cuvier) must be the type-species.

"(c) If the statement of de la Pylaie regarding the new genus *Argyrosomus* contains no more than the part quoted on pages 352-3, then the type-species is by original indication not 'designation'.

"(d) Is it wise to include this synonymy here? First of all Cuvier (as reported on page 351 of this application) regarded *S. aquila* Cuvier as a species of his own.

He makes no mention of it being equivalent to *Cheilodipterus aquila* Lacépède and moreover, de la Pylaie specifies *S. aquila* Cuvier.

"Subsequent workers may regard this synonym as being a question of taxonomy and not nomenclature, and unless the author of the application is satisfied that the synonymy is objective, it had best be omitted.

"Finally is the synonymy objective between *Perca regia* Asso and *Cheilodipterus aquila* Lacépède? If not, it had better be left for the same reason.

"If there is a problem here which affects the stability of *Argyrosomus* through not relating it firmly to *P. regia* Asso, then a fresh application should be made to the Commission for the use of the Plenary Powers to set aside previous type designations for *Argyrosomus* and to designate *P. regia* Asso as the type species."

Reply by Dr. Ethelwynn Trewavas (*British Museum (Natural History), London*)

"In answer to Dr. Ride's comments on *Sciaena* (Z.N.(S.) 850)

"(a) 1835 is correct.

"(b) Dr. Ride is right according to Article 67e; so section 12(3b) of my amended application should read thus:

*Argyrosomus* de la Pylaie, 1835 (gender: masculine), type-species, by monotypy, *Sciaena aquila* of Cuvier (= *Cheilodipterus aquila* Lacépède).

"(c) Rejection of de la Pylaie's *nomen nudum* allows use of 'monotypy'.

"(d) It is true that in *Le Règne Animal* Cuvier did not attribute *aquila* to Lacépède, but in 1830, in Cuvier & Valenciennes' *Histoire Naturelle des Poissons*, vol. 5, p. 28, he has:

'(*Sciaena aquila* nob., *Cheilodiptère aigle*, Lac.)'

Although Lacépède did latinize his names, Cuvier always quoted his vernacular version, which Lacépède placed at the head of the page. Cuvier used 'nob.' more frequently than we should, especially for combinations first proposed by him.

"The synonymy of *Perca regia* Asso and *Cheilodipterus aquila* Lacépède is subjective. On the assumption, which I have taken all reasonable steps to verify, that no type exists for either, it can be made objective by selecting a single neotype for both. Therefore, I hereby designate as neotype for both *Perca regia* Asso and *Cheilodipterus aquila* Lacépède the following specimen in the Museum National d'Histoire Naturelle in Paris:

MNHN 7511 La Rochelle coll. D'Orbigny

The following particulars of this specimen are supplied by Mr. P. J. P. Whitehead (measurements in mm.):

S.L. 420, depth 101, 1. of head 121, 2. of snout 35.3, diam. of eye 18.1, depth of preorbital 12.8, interorbital width 29.5, 1. of upper jaw 54.6, of lower jaw 59.9, 1. of P 80.3, of V 73.3, of longest anal ray 56.2. Gill-rakers on the first arch 5 + 1 + 8. D X + 128. A II 7. A slit in the abdomen shows appendages of the swim-bladder of the kind described for 'le maigre' by Cuvier (1804, and in Cuvier & Valenciennes, 1830, pl. 139). From the introduction to Asso's paper, S. Sebastian in the Bay of Biscay is a possible locality for *Perca regia*. Dieppe was the locality of *C. aquila* Lacépède. The habits of the species make it probable that these localities are in the range of one population, so that the selection of a specimen from La Rochelle, between them, is not inappropriate for both names."

In view of the comments by the above Commissioners, Dr. Trewavas has agreed to resubmit her application as follows:

The International Commission on Zoological Nomenclature is requested:

- (1) to use its plenary powers to set aside all designations of type-species for *Sciaena* Linnaeus, 1758, made prior to the Ruling now requested, and having done so, to designate *Sciaena umbra* Linnaeus, 1758, to be the type-species of that genus;
- (2) to place the following generic names on the Official List of Generic Names in Zoology:

- (a) *Umbrina* Cuvier, 1817 (gender: feminine), type-species, by monotypy, *Sciaena cirrosa* Linnaeus, 1758;
  - (b) *Argyrosomus* de la Pylaie, 1835 (gender: masculine), type-species, by monotypy, *Sciaena aquila* Lacépède, 1803 [= *Perca regia* Asso, 1801].  
[N.B. The generic name *Sciaena* Linnaeus, 1758, has already been placed on the Official List by virtue of Opinion 93.]
- (3) to place the following specific names on the Official List of Specific Names in Zoology:
- (a) *umbra* Linnaeus, 1758, as published in the binomen *Sciaena umbra* to be interpreted by the following neotype, here designated: A female of standard length 310 mm. with dorsal fin-formula XI 25, with dark soft rays in pelvic and anal fins and dark lower edge of caudal fin, without a mental barbel. Registered Nr. British Museum (Natural History): Fishes 1893.9.21.10. Locality: Zara, Dalmatia. Collector Spada-Novak. This specimen agrees with Artedi's "Gen. 39, syn. 65" whose description (misquoted with "integerrimis" instead of "nigerrimis") was used by Linnaeus as diagnosis of *Sciaena umbra*, (type-species of *Sciaena* Linnaeus, 1758);
  - (b) *cirrosa* Linnaeus, 1758, as published in the binomen *Sciaena cirrosa* (type-species of *Umbrina* Cuvier, 1817);
  - (c) *regia* Asso, 1801, as published in the binomen *Perca regia*, as interpreted by the neotype designated above (an objective synonym of *Sciaena aquila* Lacépède, 1803, type-species of *Argyrosomus* de la Pylaie, 1835).